

Remarks

The above Amendments and these Remarks are in reply to the Office Action mailed September 2, 2008 and a telephone interview with the Examiner on November 25, 2008.

Applicant acknowledges with thanks Examiner Seye's assistance in granting a telephone interview with Thomas Plunkett on November 25, 2008, during the course of which interview the participants generally discussed the claimed embodiments. Applicant agreed to further amend claim 1 to more clearly define the embodiment therein. Examiner Seye indicated that further consideration of the application would follow upon receipt of this Reply.

I. Summary of Examiner's Rejections

In the Office Action, claims 1-10 were rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent Application 10/762,944. Claim 9 was rejected under 35 U.S.C. § 112 as having insufficient antecedent basis. Claims 1, 5-6, and 10 were rejected under 35 U.S.C. § 102(e) as anticipated by Flaherty et al. (U.S. Patent Publication No. 2003/0115276, hereinafter Flaherty). Claims 2-4 and 7-9 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Flaherty in view of Doolittle et al. (U.S. Patent Publication No. 2002/0194377, hereinafter Doolittle).

II. Summary of Applicant's Response

The present Reply amends Claims 1, 2, 4-8, and 10; cancels Claim 9; and adds new Claims 11-21, all as shown above. Reconsideration of the application is respectfully requested.

III. Rejections Under Non-statutory Obviousness-type Double Patenting

Claims 1-10 were rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over Claims 1-10 of U.S. Patent Application 10/762,944.

Accordingly, provided herewith is a terminal disclaimer compliant with 1.321(c). Applicant respectfully submits that the filing of a terminal disclaimer renders moot the rejection of the claims under non-statutory obviousness-type double patenting, and reconsideration is respectfully requested.

IV. Rejections Under 35 U.S.C. § 112

In the Office Action, claim 9 was rejected under 35 U.S.C. 112 for insufficient antecedent basis. Claim 9 has been cancelled, rendering moot the rejection of this claim.

V. Rejections Under 35 U.S.C. § 102(e)

Claim 1

Claim 1 defines:

A computer program product for execution by a server computer for implementing a two-phase commit protocol, comprising:

computer code for dispatching a first prepare operation from a first server thread to a second server thread, wherein the first prepare operation is associated with a first local resource participant and a prepare phase;

computer code for processing a second prepare operation by the first server thread in parallel to the first prepare operation being processed by the second server thread, wherein the second prepare operation is associated with a second local resource participant and the prepare phase;

computer code for determining that the prepare phase is complete;

computer code for dispatching a first commit operation from the first server thread to a third server thread, wherein the first commit operation is associated with the first local resource participant and a commit phase;

computer code for processing a second commit operation by the first server thread in parallel to the first commit operation being processed by the third server thread, wherein the second commit operation is associated with the second local resource participant and the commit phase; and

computer code for writing results of the commit phase to a transaction log after determining that the commit phase is complete.

Claim 1 was rejected under 35 U.S.C. § 102(e) as allegedly anticipated by Flaherty.

Flaherty discloses message handling in a messaging system by: receiving messages from applications associated with transactions and placing the received messages in a queue for subsequent retrieval; receiving requests of prepare, commit and abort for the transactions; deferring retrieval of messages from the queue so as to occur in the same sequence as the prepare requests of the transactions with which the respective messages are associated; and retrieving from the queue messages associated with a transaction in the order in which the messages were put by the application. (Abstract).

Flaherty discloses that a coordinator process is started, writes a begin commit record in its log, sends a 'prepare' request to the participants, and enters the wait state. (Paragraph [0020]). Flaherty further discloses a messaging system with a transaction manager and two resource managers. (Fig. 2). Flaherty further discloses a sequence of steps for a unit of work. (Fig. 3). Flaherty further discloses that typically many transactions will be running on different threads, and the transactions may be using multiple processors with various levels of coupling. (Paragraph [0024]).

Claim 1, as amended, defines computer code for dispatching a first prepare operation from a first server thread to a second server thread, the first prepare operation associated with a first local resource participant and a prepare phase; computer code for processing a second prepare operation by the first server thread in parallel to the first prepare operation being processed by the second server thread, the second prepare

operation associated with a second local resource participant and the prepare phase; and computer code for determining that the prepare phase is complete. Claim 1 has been further amended to define computer code for dispatching a first commit operation from the first server thread to a third server thread, the first commit operation associated with the first local resource participant and a commit phase; computer code for processing a second commit operation by the first server thread in parallel to the first commit operation being processed by the third server thread, the second commit operation associated with the second local resource participant and the commit phase; and computer code for writing results of the commit phase to a transaction log after determining that the commit phase is complete.

Applicant respectfully submits that Flaherty discloses that a coordinator sends a prepare request to a participant (Flaherty Fig. 1, Coordinator 110, and Participant 120) and that the participant processes the prepare request. (Paragraph [0020]). The coordinator enters a wait state after sending the prepare requests to the participants. (Paragraph [0020]). Flaherty further describes that to process a prepare request, after a participant has received a prepare request, the participant checks if it can commit the transaction; if it can, the participant writes a ready record in its log, sends a vote_commit response to the coordinator, and enters the ready state; otherwise the participant decides to unilaterally abort the transaction. (Paragraph [0021]). After the coordinator receives votes from all of the participants it decides whether to commit or abort the transaction according to a global commit rule. (Paragraph [0022]). The coordinator does not appear to process a prepare request. Instead the participant processes the prepare request. Therefore, the coordinator described in Flaherty does not appear to disclose a first server thread which dispatches a first prepare operation that then processes a second prepare operation in parallel while the first prepare operation is being processed by the second server thread, as defined by Claim 1.

Claim 1 has also been amended to define that the first prepare operation is associated with a first local resource participant and that the second prepare operation is associated with a second local resource participant. Flaherty further discloses that typically many transactions will be running on different threads, and the transactions may be using multiple processors with various levels of coupling. (Paragraph [0024]). However, Flaherty does not appear to disclose a transaction with multiple local resource participants.

Furthermore, Applicant respectfully submits that Flaherty does not appear to disclose that the second server thread is processing a prepare operation associated with the first local resource participant, and that the third server thread is processing the commit operation associated with the first local resource participant.

Flaherty further provides that in other environments such as XA or DTC the order of the commit call to MQ and DB is non-deterministic, and the calls may be in parallel. (Paragraph [0025]). However, Flaherty does not appear to disclose that the first server thread processes a prepare operation in parallel to a second server thread processing a prepare operation, and that subsequently the first server thread processes a commit

operation in parallel to a third server thread processing a commit operation.

In view of the comments provided above, Applicant respectfully submits that the embodiment defined by Claim 1, as amended, is neither anticipated by, nor obvious in view of the cited references, and reconsideration thereof is respectfully requested.

Claim 6

The comments provided above with respect to Claim 1 are hereby incorporated by reference. Claim 6 has been similarly amended by the current Reply to more clearly define the embodiments therein. For similar reasons as provided above with respect to claim 1, Applicant respectfully submits that Claim 6, as amended, is likewise neither anticipated by, nor obvious in view of the cited references, and reconsideration thereof is respectfully requested.

Claims 5 and 10

Claims 5 and 10 depend from and include all of the features of Claims 1 or 6. Claims 5 and 10 are not addressed separately, but it is respectfully submitted that these claims are allowable as depending from an allowable independent claim, and further in view of the amendments to the independent claims, and the comments provided above. Reconsideration thereof is respectfully requested.

VI. Rejections Under 35 U.S.C. § 103(a)

Claims 2-4 and 7-9

Claim 9 has been canceled, rendering moot the rejection of this claim. Claims 2-4 and 7-9 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Flaherty in view of Doolittle. Claims 2-4 and 7-8 depend from and include all of the features of Claims 1 or 6. Claims 2-4 and 7-8 are not addressed separately, but it is respectfully submitted that these claims are allowable as depending from an allowable independent claim, and further in view of the amendments to the independent claims, and the comments provided above. Reconsideration thereof is respectfully requested.

VII. Additional Amendments

Claims 11-21 have been newly added by the present Reply. Applicant respectfully requests that new Claims 11-21 be included in the application and considered therewith.

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VIII. Conclusion

In light of the above, it is respectfully submitted that all of the claims now pending in the subject patent application should be allowable, and reconsideration thereof is respectfully requested. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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